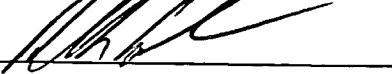


Docket No.: GR 97 P 1903

RECEIPT

FILE COPY

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

By: 

Date: March 9, 2000

*RECEIPT*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hansjoerg Reichert et al.  
Appl. No. : 09/483,737  
Filed : January 14, 2000  
Title : Method and Apparatus for Producing a Chip-Substrate Connection  
Unit : 2811



LETTER

Hon. Commissioner of Patents and Trademarks,  
Washington, D.C. 20231

Sir:

Undersigned counsel has received the Filing Receipt for the above-identified application.

However, the priority information has been listed incorrectly and should be listed as:

**FED REP GERMANY 197 30 118.5 07/14/97**

The continuing information has been omitted and should be listed as:

**THIS APPLN IS A CON OF PCT/DE98/01737 06/24/98**

It is respectfully requested that the Patent Office Records be changed and that a new Filing Receipt be issued, so that the printed patent will show the correct priority and continuing information.

Respectfully submitted,



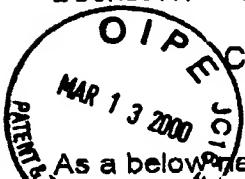
RALPH E. LOCHER  
REG NO. 41,947

/av

Date: March 9, 2000

Lerner and Greenberg, P.A.  
Post Office Box 2480  
Hollywood, FL 33022-2480  
Tel: (954) 925-1100  
Fax: (954) 925-1101

Docket No.: GR 97 P 1903

COMBINED DECLARATION AND POWER OF ATTORNEY  
IN ORIGINAL APPLICATION

As a below-named inventor, I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that I verily believe that I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

METHOD AND APPARATUS FOR PRODUCING A CHIP-SUBSTRATE  
CONNECTION

described and claimed in the specification bearing that title, that I understand the content of the specification, that I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve month prior to this application, that I acknowledge my duty to disclose information of which I am aware which is material to the examination of this application under 37 C.F.R. 1.56a, and that no application for patent or inventor's certificate of this invention has been filed earlier than the following in any country foreign to the United States prior to this application by me or my legal representatives or assigns:

German Application No. 197 30 118.5, filed July 14, 1997, the International Priority of which is claimed under 35 U.S.C. §119; and International Application No. PCT/DE98/01737, filed June 24, 1998, the Priority of which is claimed under 35 U.S.C. §120.

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

HERBERT L. LERNER (Reg.No.20,435)  
LAURENCE A. GREENBERG (Reg.No.29,308)  
WERNER H. STEMER (Reg.No.34,956)  
RALPH E. LOCHER (Reg.No. 41,947)

Address all correspondence and telephone calls to:

LERNER AND GREENBERG, P.A.  
POST OFFICE BOX 2480  
HOLLYWOOD, FLORIDA 33022-2480  
Tel: (954) 925-1100 - Fax: (954) 925-1101

GR 97 P 1903

METHOD AND APPARATUS FOR PRODUCING A CHIP-SUBSTRATE CONNECTION5 Cross-Reference to Related Application:

This is a continuation of copending International Application PCT/DE98/01737, filed June 24, 1998, which designated the United States.

10 Background of the Invention:Field of the Invention:

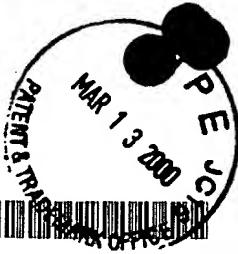
The invention relates to a method and an apparatus for producing a chip-substrate connection by alloying or brazing, using a solder with a two metal-containing constituents X and Y, the first constituent X containing in particular gold or a similar precious metal. The invention furthermore relates to a solder for the production of a chip-substrate connection, and to a semiconductor component with a semiconductor chip which is secured to a substrate by alloying or brazing.

20

When a rear side of a semiconductor chip is joined to a substrate, which is usually referred to as chip or die bonding, the requirements with regard to sufficient mechanical fixing and also good thermal and electrical conductivity must be fulfilled individually or jointly, depending on the application. An important factor is the compatibility of the

## FILING RECEIPT

OC00000004975330\*

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: ASSISTANT SECRETARY AND  
COMMISSIONER OF PATENT AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/483,737	01/14/2000	2811	690	GR-97-P-1903	1	16	3

Lerner And Greenberg PA  
P O Box 2480  
Hollywood, FL 33022-2480

Date Mailed: 02/25/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

## Applicant(s)

Hansjorg Reichert, Munchen, GERMANY ;  
Margarete Deckers, Munchen, GERMANY ;  
Rainer Zanner, Munchen, GERMANY ;

## Continuing Data as Claimed by Applicant

*This Appln is a con of*

## Foreign Applications

GERMANY 197 30 118.5 07/14/1997  
PCT PCT/DE98/01737 07/14/1997

**FAXED**

MAR 06 1998

Foreign filing license granted on 02/25/2000

## Title

Method And Apparatus For Producing A Chip-Substrate Connection

## Preliminary Class

257

Data entry by : NIMMONS, EVELYN

Team : OIPE

Date: 02/25/2000





**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

**PLEASE NOTE the following information about the Filing Receipt:**

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents  
Office of Initial Patent Examination  
Customer Service Center  
Washington, DC 20231

## FORMALITIES LETTER



\*OC00000004975331\*

UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark OfficeAddress: COMMISSIONER OF PATENT AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
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09/483,737



Hansjorg Reichert

GR-97-P-1903

Lerner And Greenberg PA  
P O Box 2480  
Hollywood, FL 33022-2480

Date Mailed: 02/25/2000

## NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

*Filing Date Granted*

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- **The balance due by applicant is \$ 130.**

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*A copy of this notice MUST be returned with the reply.*

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Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE